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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,564	07/06/2005	Jozef J. I. Van Dun	62996A	5827
109 7590 08/06/2008 The Dow Chemical Company Intellectual Property Section P.O. Box 1967 Midland, MI 48641-1967				
EXAMINER				
GRAY, JILL M				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
08/06/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/541,564

**Applicant(s)**

VAN DUN ET AL

**Examiner**

Jill Gray

**Art Unit**

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/86)  
Paper No(s)/Mail Date 5/12/2006
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 3, 5, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by or in the alternative under 35 U.S.C. 103 (s) as obvious over Gessner 5,108,827.

Gessner discloses multiconstituent fibers composed of dispersed blends of at least two different immiscible thermoplastic polymers having a dominant continuous phase with at least one noncontinuous phase dispersed therein. See entire document, and for example abstract. In addition, while Gessner is silent as to the specific interfacial tension between his polymers, it is noted that he teaches the same type of polymers disclosed by applicants as being suitable. Accordingly, the examiner has reason to believe that the interfacial tension of the polymer mixtures disclosed by Gessner are within the instant claimed range in the absence of factual evidence to the contrary. Applicants are invited to provide such evidence.

Therefore the teachings of Gessner anticipates or in the alternative, renders obvious the invention as claimed in present claims 1, 3, 5, and 9.

5. Claims 1-9 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choe et al., 5,654,097 (Choe).

Choe discloses bilayer filaments having a sheath/core configuration wherein the filament comprises at least three thermoplastic polymers, wherein a mixture of at least two of the polymer comprises a portion of the fiber surface, as required by present

claims 1, 3, and 5-7. See entire document, and in particular, column 1, lines 19-29. The thermoplastic sheath includes a rubber blended with a thermoplastic sheath polymer inherently having differently viscosities. In addition, Choe discloses that most of the polymers are thermodynamically incompatible with other polymers and mixtures separate and that the segments form separate regions, i.e. domains dispersed in a continuous elastomer phase, as required by present claim 9. See column 5, lines 25-45. Choe is silent as to the interfacial tension of the polymers within his mixture. However, it is the examiner's position that the teaching of Choe that his mixtures separate and form separate regions having domains dispersed in a continuous phase renders obvious an interfacial tension within the instant claimed range in the absence of factual evidence to the contrary. Applicants are invited to provide such evidence. Also, Choe discloses that the sheath/core weight ratio ranges from about 2:98 to about 30:70. While not specifically disclosing the percent by volume, it is the examiner's position that the disclosed amounts necessarily embrace a sheath component comprising less than 20 percent by volume, as required by claim 8, in the absence of factual evidence to the contrary. Applicants are invited to provide such evidence.

Regarding the viscosity ratio of claims 2 and 4, and the specific viscosity selection of claims 14-15, these parameters would have been obvious to determine during routine experimentation commensurate with the desired properties of the end product, for example in determining the desired thickness of the sheath component and volume of dispersed polymer.

Therefore, the teachings of Choe would have rendered obvious the invention as claimed in present claims 1-9 and 14-15.

5. Claims 6-7, 10-13, and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gessner 5,108,827 as applied above to claims 1, 3, 5, and 9.

Gessner is as set forth above, but does not specifically teach the melting point and glass transition point differential or that the disperse polymer is in particulate form or the thickness of the dispersed particulates. Also, Figure 1 discloses wherein the dispersed polymer comprises a portion of the fiber surface, per claims 18 and 19. Gessner discloses that the skilled artisan can select from several polymers commensurate with the desired end properties as long as the polymers are immiscible. It would have been obvious to one having ordinary skill in the art to choose the specific melting point differential and glass transition point differential during routine experimentation for optimization purposes. In addition, Gessner discloses that the dispersed phase exists as an elongated fibrillar polymer domain. The limitation with respect to the particulate thickness and particle size these requirements are drawn to the size of the particles, wherein changes in size are not construed to be a matter of invention in the absence of factual evidence to the contrary. Regarding claims 6-7 and 10-11, Gessner teaches fibers comprising PE dispersed in a PP phase. This teaching would have provided motivation to the skilled artisan for multiconstituent fibers comprising a core of propylene polymer. Regarding the thickness of the sheath, this limitation would have been obvious to determine during routine experimentation.

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Moreover, this requirement this requirement is drawn to the size of the fiber and changes in size ordinarily are not a matter of invention.

Therefore, the teachings of Gessner would have rendered obvious the invention as claimed in present claims 6-7, 10-13, and 16-19.

No claims are allowed.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill Gray whose telephone number is 571-272-1524. The examiner can normally be reached on M-Th and alternate Fridays 8:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton I. Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jill Gray  
Primary Examiner  
Art Unit 1794

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Primary Examiner, Art Unit 1794